

### **REMARKS**

Applicants submit that entry of this amendment is proper under 37 C.F.R. §1.116, since no new claims or issues are introduced and the only claim amendments are those that Applicants understand the Examiner as declaring to be acceptable to this specific Examiner to withdraw the rejection under 35 U.S.C. §101, thereby reducing the number of issues for Appeal. As described later, Applicants do not believe that any claim changes are necessary, since it is believed that the claimed invention inherently meets the requirements for statutory subject matter. Thus, these claim changes are being presented only in an effort to expedite prosecution, since Applicants do not believe that the rejection for statutory subject matter is proper and believe that issues are ripe for an Appeal even with the original claim wording.

Claims 1-33 are all the claims presently pending in the application.

It is noted that the claim amendments, if any, are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims, or for any statutory requirements of patentability (since Applicants maintain that results inherent from steps described in method claims do not have to be expressly articulated in the claims). Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-33 stand rejected under 35 U.S.C. §101 as directed to non-statutory subject matter. Claims 1-33 stand rejected under 35 U.S.C. §102(a) as anticipated by the inventors' IEEE presentation for a conference dated December 9, 2002, wherein some aspects of the present invention were published.

These rejections are respectfully traversed in the following discussion.

#### **I. THE CLAIMED INVENTION**

The claimed invention, as exemplarily defined in independent claim 1, is directed to a method of processing an inductive learning model for a dataset of examples. The dataset is divided into a plurality of subsets of data. An estimated learning model for the dataset is then developed by developing a learning model for a first subset of the plurality of subsets.

Conventional methods, as described at line 21 of page 3 through line 6 of page 4, of learning model methods for a database require that the entire database be evaluated before the effects of hypothetical parameters for a test model are known. This process can take many hours (or days) and be costly, so that it can be prohibitive to spend so much effort in the development of an optimal model to perform the intended task.

In contrast, the present invention provides a method to develop an inductive learning model in much shorter time, including an estimate of the accuracy of the model as currently developed and an estimated cost to develop a complete model of the entire database.

## II. THE 35 USC §101 REJECTION

Claims 1-33 stand rejected under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter.

Applicants remain uncertain what exactly the Examiner is attempting to assert in this rejection, since the Examiner concedes that the present invention does indeed reduce time and/or cost to develop a learning model for a large database and is, therefore, a practical application. Thus, Applicants understand the Examiner as conceding that the present invention does indeed satisfy the requirements of statutory subject matter.

However, the Examiner then strangely adds a procedural requirement, alleging that method claims must expressly articulate the practical results before the invention can be considered as directed toward statutory subject matter.

Applicants respectfully disagree, since statutory subject matter is a characteristic of the invention as a whole and is not dependent upon using special wording in the claims to describe the practical result. That is, Applicants submit that merely adding a description of the practical result to the claims, when the steps described in the claims inherently achieve this practical result, does not mysteriously convert the invention from non-statutory subject matter into statutory subject matter.

No case law has ever made such holding, nor do the new Guidelines add a procedural requirement for statutory subject matter that the claims must artificially articulate the tangible (i.e., “real world”) result of the invention. The test for statutory subject matter for computer

method claims remains whether the claimed invention as a whole (e.g., whether the invention as implemented) provides a real world result, not whether the claims artificially recite the tangible result.

However, in an attempt to expedite prosecution and only as an attempt to expedite prosecution, Applicants have amended the appropriate rejected method claims to add a description understood by Applicants as wording that this specific Examiner considers will address concerns relative to the current 35 U.S.C. §101 rejection. Applicants continue to maintain that, because the present invention, even as originally described in the original claims, inherently satisfies the requirements for 35 U.S.C. §101, this revised wording is not necessary to address any perceived statutory subject matter issues.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

### III. THE PRIOR ART REJECTION

The Examiner alleges that Applicants' own publication dated December, 2002, anticipates the present invention.

On page 18 of the latest Office Action, the Examiner writes:

*"The Examiner acknowledges the art is within the one year grace period of the filing date. The problem [that] arises is that the inventive entity is not the same. Authors Shaw-hwa Lo and Salvatore Stolfo are not listed as inventors. Additionally both Shaw-hwa Lo and Salvatore Stolfo are affiliated with Columbia University and not International Business Machine[s]. Therefore the art 'Progressive Modeling' is valid to use."*

In response, Applicants submit that the authorship listing of the reference publication is not, and never has been, an indication of the status of being a co-inventor for the present invention. The names of these two students were added to a publication merely as a benefit and courtesy so that these students could add the publication to their academic credentials as a specific topic they encountered during their experience at IBM.

Moreover, Applicants submit that merely adding someone's name to a publication is not a concession by the Assignee that the person is necessarily a co-inventor. The Assignee's normal practice for adding names as a courtesy to such publications, when there is no

contribution to actual conception or reduction to practice, is that these names are listed at the end of the authorship listing. If either Lo or Stolfo had provided any contribution that is properly attributable as inventive in nature to the object of the publication, their names would have been properly identified, depending upon relative contribution, either at the front of the listing or in strict alphabetical listing along with the listed IBM co-inventors.

In the instant case, the listing on this IEEE publication shows the two non-IBM-employees at the end of the listing of authors and outside the alphabetical listing of the IBM co-inventors. Co-inventor Fan submits herewith a Rule 132 affidavit indicating that, in accordance with normal IBM procedures, these two names were indeed added to the publication strictly as a courtesy, not as an indication of co-invention. Applicants maintain that the listing of co-inventors in the Declaration correctly identifies the inventors of the present application.

Second, as Applicants indicated in their previous response, the present invention includes aspects beyond those presented in the December 9-12 conference.

Thus, as one example, independent claims 1 and 8 do not describe that the divisions of the original database need to be equal in size, as indicated in the first sentence of §2.1 of the IEEE publication. Rather, as described in the specification of the present application, it was subsequently recognized that the subset of data need only satisfy statistical measures, such as randomness, and that there is no need to divide the database into equal subsets.

Therefore, even if this document were qualified as a prior art reference, which characterization Applicants continue to traverse, Applicants submit that there are additional elements of the claimed invention that are not taught or suggested by this earlier publication.

The Examiner is, therefore, respectfully requested to withdraw this rejection for either or both of these reasons.

#### **IV. FORMAL MATTERS AND CONCLUSION**

In view of the foregoing, Applicant submits that claims 1-33, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,



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**CERTIFICATION OF TRANSMISSION**

I certify that I transmitted electronically, via EFS, this Amendment under 37 CFR §1.116 to Examiner P. Coughlan on April 16, 2007.



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